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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,772	03/07/2002	Mark Melvin Butterworth	10011181-1	2557
57299	7590	02/16/2006	EXAMINER	
AVAGO TECHNOLOGIES, LTD. P.O. BOX 1920 DENVER, CO 80201-1920			PERUNGAVOOR, SATHYANARAYA V	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,772 ✓

Applicant(s)

BUTTERWORTH, MARK MELVIN

Examiner

Sath V. Perungavoor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant(s) Response to Official Action

- [1] The response filed on January 30, 2006 has been entered and made of record.

Response to Arguments/Amendments

- [2] Presented arguments have been fully considered, but are rendered moot in view of the new ground(s) of rejection.

- [3] Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- [4] Claims 1-3, 5-8, 10-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayshi [US 5,675,672] in view of Teufel et al. ("Teufel") [US 6,243,503].

Regarding claim 1, Nakabayshi discloses the following claim limitations:

A method of generating an electronic text file from a paper-based document that includes a plurality of characters, the method comprising [Figure 3]: capturing a

plurality of partially overlapping digital images of the document with an image capture device *[56 and 60 on Figure 3, Column 5 Lines 19-39: First file (first image) and second file (second image) are overlapping.]*; performing optical character recognition on each one of the plurality of captured digital images, and thereby generating a corresponding plurality of electronic text files, each one of the electronic text files including a portion of the plurality of characters in the document *[58 and 62 on Figure 3]*; comparing the plurality of electronic text files with one another to identify characters that are in common between the electronic text files *[Column 5 Lines 36-39]*; and combining the plurality of electronic text files into a combined text file based on the comparison, wherein the combined text file includes the plurality of characters in the document *[Column 5 Lines 57-60]*.

Nakabayshi does not explicitly disclose the following claim limitations:

receiving direction information indicative of a direction of movement between the image capture device and the document during the capture of the plurality of digital images;

However, in the same field of endeavor Teufel discloses the deficient claim limitations, as follows:

receiving direction information indicative of a direction of movement between the image capture device and the document during the capture of the plurality of digital images *[Column 7 Lines 40-44]*;

Nakabayshi and Teufel are combinable because they are from the same field of document scanning.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi with Teufel to receive direction information, the motivation being to perform imaging independent of preset direction [*Column 1, Lines 58-62*].

Regarding claim 2, Nakabayshi meets all the claim limitations, as follows:

The method of claim 1, and further comprising: storing order information representing the order in which the plurality of digital images were captured [*Column 4 Lines 45-48*].

Regarding claim 3, Nakabayshi meets all the claim limitations, as follows:

The method of claim 2, wherein the comparison of the plurality of text files is based on the stored order information [*Column 4 Lines 54-58*].

Regarding claim 5, Teufel meets all the claim limitations, as follows:

The method of claim 1, wherein the plurality of digital images are captured with a digital camera, the method further comprising: automatically detecting the direction information [*Column 10, Lines 6-12: motion detector*].

Regarding claim 6, Nakabayshi meets all the claim limitations, as follows:

The method of claim 1, wherein the plurality of digital images are captured automatically at a predefined time interval [*Column 6 Lines 53-54: The scanner meets this limitation*].

Regarding claim 7, Nakabayshi discloses the following claim limitations:

an image sensor for generating a plurality of partially overlapping digital images based on optical images directed onto the image sensor by the lens [120 on Figure 7, 56 and 60 on Figure 3, Column 5 Lines 19-39: *First file (first image) and second file (second image) are overlapping.*], and perform optical character recognition on the plurality of digital images, and thereby generate an electronic text file for each one of the plurality of digital images, the electronic text file for each digital image including text appearing in the digital image, the controller configured to identify overlapping text between electronic text files and stitch the text in the plurality of text files together based on the identified overlapping text [110 on Figure 7, 58 and 62 on Figure 3, Column 5 Lines 36-39, Column 5 Lines 57-60; Column 4 Lines 43-48; Column 6 Line 53].

Nakabayshi does not explicitly disclose the following claim limitations:

A digital camera comprising: a lens;
a controller coupled to the image sensor and configured to receive direction information indicative of a direction of movement of the digital camera during capture of the plurality of digital images

However, in the same field of endeavor Teufel discloses the deficient claim limitations, as follows:

A digital camera comprising: a lens [Figure 1; Column 7, Lines 1-5]; a controller coupled to the image sensor and configured to receive direction information indicative of a direction of movement of the digital camera during capture of the plurality of digital images [Column 7 Lines 40-44];

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Nakabayshi and Teufel are combinable because they are from the same field of document scanning.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi with Teufel to receive direction information, the motivation being to perform imaging independent of preset direction [*Column 1, Lines 58-62*].

Regarding claim 8, all claimed limitations are set forth and rejected as per discussion for claim 2.

Regarding claim 10, all claimed limitations are set forth and rejected as per discussion for claim 5.

Regarding claim 11, all claimed limitations are set forth and rejected as per discussion for claim 6.

Regarding claim 12, Nakabayshi discloses the following claim limitations:

An electronic device including a digital camera [*120 on Figure 7*], the electronic device comprising: a display screen for displaying images captured with the digital camera [*116 on Figure 7*]; an input device for inputting information into the electronic device [*118 on Figure 7*]; and a processor configured to perform optical character recognition on digital images captured with the digital camera and generate corresponding electronic text files, the electronic text file for each digital image including text appearing in the digital image, the processor configured to stitch the text from the

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electronic text files together [110 on Figure 7, 58 and 62 on Figure 3, Column 5 Lines 36-39, Column 5 Lines 57-60; Column 4 Lines 43-48; Column 6 Line 53].

Nakabayshi does not explicitly disclose the following claim limitations:

based at least in part on direction information indicative of a direction of movement of the digital camera while the digital images are being captured;

However, in the same field of endeavor Teufel discloses the deficient claim limitations, as follows:

based at least in part on direction information indicative of a direction of movement of the digital camera while the digital images are being captured [Column 7 Lines 40-44];

Nakabayshi and Teufel are combinable because they are from the same field of document scanning.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi with Teufel to stitch based on direction information, the motivation being to perform imaging independent of preset direction [Column 1, Lines 58-62].

Regarding claim 13, Teufel meets all the claim limitations, as follows:

The electronic device of claim 12, wherein the electronic device is one of a cellular telephone, a personal digital assistant device (i.e. Pocket PC), and a laptop computer [Column 12, Lines 40-42].

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for claim 2.

Regarding claim 16, all claimed limitations are set forth and rejected as per discussion for claim 5.

Regarding claim 17, all claimed limitations are set forth and rejected as per discussion for claim 6.

[5] Claims 4, 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakabayshi [US 5,675,672] in view of Teufel et al. ("Teufel") [US 6,243,503] further in view of Fisher et al. ("Fisher") [US 2001/0030693 A1].

Regarding claim 4, Nakabayshi and Teufel disclose the claim limitations as set forth in claim 1.

Nakabayshi and Teufel do not explicitly disclose the following claim limitations:

The method of claim 1, wherein the plurality of digital images are captured with a digital camera, the method further comprising: providing the direction information with a user input device of the digital camera

However, in the same field of endeavor Fisher discloses the deficient claim limitations, as follows:

The method of claim 1, wherein the plurality of digital images are captured with a digital camera, the method further comprising: providing the direction information with a user input device of the digital camera [Paragraph 0055].

Nakabayshi, Teufel and Fisher are combinable because they are from the same field of image processing.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Nakabayshi and Teufel with Fisher to have the user input direction information, the motivation being to give more freedom to scanning direction [Paragraph 0055].

Regarding claim 9, all claimed limitations are set forth and rejected as per discussion for claim 4.

Regarding claim 15, all claimed limitations are set forth and rejected as per discussion for claim 4.

Contact Information

[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Bhavesh M. Mehta whose telephone number is (571) 272-7453, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: February 10, 2006

By: 

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